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1 AAAAAGAAAG GAAGAAAATG GAAATACAAC AAACACACCG CAAAATCAAT
51 CGCCCTCTGG TTTCTCTCGC TTTAGTAGGA GCATTAGTCA GCATCACACC
101 GCAACAAAGT CATGCCGCCT TTTTCACAAC CGTGATCATT CCAGCCATTG
151 TTGGGGGTAT CGCTACAGGC ACCGCTGTAG GAACGGTCTC AGGGCTTCTT
201 AGCTGGGGGC TCAAACAAGC CGAAGAAGCC AATAAAACCC CAGATAAACC
251 CGATAAAGTT TGGCGCATT C AAGCAGGAAA AGGCTTTAAT GAATTCCCTA
301 ACAAGGAATA CGACTTATAC AGATCCCTTT TATCCAGTAA GATTGATGGA
351 GGTTGGGATT GGGGGAATGC CGCTAGGCAT TATTGGGTCA AAGGCGGGCA
401 ACAGAATAAG CTTGAAGTGG ATATGAAAGA CGCTGTAGGG ACTTATACCT
451 TATCAGGGCT TAGAACTTT ACTGGTGGGG ATTTAGATGT CAATATGCAA
501 AAAGCCACTT TACGCTTGGG CCAATTCAAT GGCAATTCTT TTACAAGCTA
551 TAAGGATAGT GCTGATCGCA CCACGAGAGT GATTTCAACG CTAAAAATAT
601 CTCAATTGAT AATTTTGCAG AAATCAACAA CTCGTGTGGG TTCTGGAGCC
651 GGGAGGAAAG CCAGCTCTAC GGTTTTGACT TTGCAAGCTT CAGAAGGGAT
701 CACTAGCGAT AAAAACGCTG AAATTTCTCT TTATGATGGT GCCACGCTCA
751 ATTTGGCTTC AAGCAGCGTT AAATTAATGG GTAATGTGTG GATGGGCCGT
801 TTGCAATACG TGGGAGCGTA TTTGGCCCCT TCATACAGCA CGATAAACAC
851 TTCAAAAGTA ACAGGGGAAG TGAATTTTAA CCACCTCACT GTTGGCGATA
901 AAAACGCCGC TCAAGCGGGC ATTATCGCTA ATAAAAAGAC TAATATTGGC
951 AACTGGATT TGTGGCAAAG CGCCGGGTTA AACATTATCG CTCCTCCAGA
1001 AGGTGGCTAT AAGGATAAAC CCAATAATAC CCCTTCTCAA AGTGGTGCTA
1051 AAAACGACAA AAATGAAAGC GCTAAAAACG ACAAACAAGA GAGCAGTCAA
1101 AATAATAGTA AACTCAGGT CATTAAACCA CCCAATAGTG CGCAAAAAAC
1151 AGAAGTTCAA CCCACGCAAG TCATTGATGG GCCTTTTGCG GGCGGCAAAG
1201 ACACGGTTGT CAATATCAAC CGCATCAACA CTAACGCTGA TGGCAGGATT
1251 AGAGTGGGAG GGTTTAAAGC TTCTCTTACC ACCAATGCGG CTCATTGCA
1301 TATCGGCAAA GCGGTGTCA ATCTGTCCAA TCAAGCGAGC GGGCGCTCTC

FIG. 1A

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1351 TTATAGTGGA AAATCTAACT GGAATATCA CCGTTGATGG GCCTTTAAGA
1401 GTGAATAATC AAGTGGGTGG CTATGCTTTG GCAGGATCAA GCGCGAATTT
1451 TGAGTTTAAAG GCTGGTACGG ATACCAAAAA CGGCACAGCC ACTTTTAATA
1501 ACGATATTAG TCTGGGAAGA TTTGTGAATT TAAAGGTGGA TGCTCATACA
1551 GCTAATTTTA AAGGTATTGA TACGGGTAAT GGTGGTTTCA ACACCTTAGA
1601 TTTTAGTGGC GTTACAGACA AAGTCAATAT CAACAAGCTC ATTACGGCTT
1651 CCACTAATGT GGCCGTTAAA AACTTCAACA TTAATGAATT GATTGTAAAA
1701 ACCAATGGGA TAAGTGTGGG GGAATATACT CATTTTAGCG AAGATATAGG
1751 CAGTCAATCG CGCATCAATA CCGTGCGTTT GGAAACTGGC ACTAGGTCAC
1801 TTTTCTCTGG GGGTGTTAAA TTAAAGGTG GCGAAAAATT GGTATAGAT
1851 GAGTTTTACT ATAGCCCTTG GAATTATTTT GACGCTAGAA ATATTAATAA
1901 TGTGAAATC ACCAATAAAC TTGCTTTTGG ACCTCAAGGA AGTCCTTGGG
1951 GCACATCAAA ACTTATGTTC AATAATCTAA CCCTAGGTCA AAATGCGGTC
2001 ATGGATTATA GCCAATTTTT AAATTTAACC ATTCAAGGGG ATTTTCATCA
2051 CAATCAAGGC ACTATCAACT ATCTGGTCCG AGGTGGGAAA GTGGCAACCT
2101 TAAGCGTAGG CAATGCAGCA GCTATGATGT TTAATAATGA TATAGACAGC
2151 GCGACCGGAT TTTACAAACC GTCATCAAG ATTAACAGCG CTCAAGATCT
2201 CATTAAAAAT ACAGAACATG TTTTATTGAA AGCGAAAATC ATTGGTTATG
2251 GTAATGTTTC TACAGGTACC AATGGCATTG GTAATGTTAA TCTAGAAGAG
2301 CAATTCAAAG AGCGCCTAGC CCTTTATAAC AACAATAACC GCATGGATAC
2351 TTGTGTGGTG CGAAATACTG ATGACATTAA AGCATGCGGT ATGGCTATCG
2401 GCGATCAAAG CATGGTGAAC AACCTGACA ATTACAAGTA TCTTATCGGT
2451 AAGGCATGGA AAAATATAGG GATCAGCAAA ACAGCTAATG GCTCTAAAT
2501 TTCGGTGTAT TATTTAGGCA ATTCTACGCC TACTGAGAAT GGTGGCAATA
2551 CCACAAATTT ACCCACAAC ACCACTAGCA ATGCACGTTC TGCCAACAAC
2601 GCCCTTGCAC AAAACGCTCC TTTCGCTCAA CCTAGTGCTA CTCCTAATTT
2651 AGTCGCTATC AATCAGCATG ATTTTGGCAC TATTGAAAGC GTGTTTGAAT

FIG. 1B

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2701 TGGCTAACCG CTCTAAAGAT ATTGACACGC TTTATGCTAA CTCAGGCGCT
2751 CAAGGCAGGG ATCTCTTACA AACCTTATTG ATTGATAGCC ATGATGCGGG
2801 TTATGCCAGA AAAATGATTG ATGCTACAAG CGCTAATGAA ATCACCAAGC
2851 AATTGAATAC GGCCACTACC ACTTTAAACA ACATAGCCAG TTTAGAGCAT
2901 AAAACCAGCG GCTTACAAAC TTTGAGCTTG AGTAATGCGA TGATTTTAAA
2951 TTCTCGTTTA GTCAATCTCT CCAGGAGACA CACCAACCAT ATTGACTCGT
3001 TCGCCAAACG CTTACAAGCT TTAAGAGACC AAAAATTCGC TTCTTTAGAA
3051 AGCGCGGCAG AAGTGTTGTA TCAATTTGCC CCTAAATATG AAAACCTAC
3101 CAATGTTTGG GCTAACGCTA TTGGGGGAAC GAGCTTGAAT AATGGCTCTA
3151 ACGCTTCATT GTATGGCACA AGCGCGGGCG TAGACGCTTA CCTTAACGGG
3201 CAAGTGGAAG CCATTGTGGG CGGTTTTGGA AGCTATGGTT ATAGCTCTTT
3251 TAATAATCGT GCGAACTCCC TTAAGTCTGG GGCCAATAAC ACTAATTTTG
3301 GCGTGTATAG CCGTATTTTA ACCAACCAGC ATGAATTTGA CTTTGAAGCT
3351 CAAGGGGCAC TAGGGAGCGA TCAATCAAGC TTGAATTTCA AAAGCGCTCT
3401 ATTACAAGAT TTGAATCAA GCTATCATT CTTAGCCTAT AGCGCTGCAA
3451 CAAGAGCGAG CTATGGTTAT GACTTCGCGT TTTTATAGGAA CGCTTTAGTG
3501 TTAAGACCAA GCGTGGGTGT GAGCTATAAC CATTTAGGTT CAACCAACTT
3551 TAAAGCAAC AGCACCAATC AAGTGGCTTT GAAAAATGGC TCTAGCAGTC
3601 AGCATTTATT CAACGCTAGC GCTAATGTGG AAGCGCGCTA TTATTATGGG
3651 GACACTTCAT ACTTCTACAT GAATGCTGGA GTTTTACAAG AGTTCGCTCA
3701 TGTTGGCTCT AATAACGCCG CGTCTTTAAA CACCTTTAAA GTGAATGCCG
3751 CTCGCAACCC TTAAATACC CATGCCAGAG TGATGATGGG TGGGGAATTA
3801 AAATTAGCTA AAGAAGTGTT TTTGAATTTG GGC GTTGT TTTATGCACAA
3851 TTTGATTTCC AATATAGGCC ATTTGCTTC CAATTTAGGA ATGAGGTATA
3901 GTT^{phe}CTAAAT ACCGCTCTTA AACCCATGCT CAAAGCATGG GTTTGAAATC
3951 TTACAAAACA

FIG. 1C

ERSATZRI ATT

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1 MEIQQTHRKI NRPLVSLALV GALVSITPQQ SHAAFFTTVI IPAIVGGIAT
51 GTAVGTVSGL LSWGLKQAEK ANKTPDKPDK VWRIQAGKGF NEFPNKEYDL
101 YRSLSSKID GGWDWGNAAR HYWVKGGQQN KLEVDMKDAV GTYTLISGLRN
151 FTGGDLVDNM QKATLRLGQF NGNSFTSYKD SADRTTRVIS TLKISQLIIL
201 QKSTTRVGSG AGRKASSTVL TLQASEGITS DKNAEISLYD GATLNLASSS
251 VKLMGNVWMG RLQYVGAYLA PSYSTINTSK VTGEVNFNHL TVGDKNAAQA
301 GIIANKKTNL GTLDLWQSAG LNIIAPPEGG YKDKPNNTPS QSGAKNDKNE
351 SAKNDKQESS QNNSNTQVIN PPNSAQKTEV OPTQVIDGPF AGGKDTVVNI
401 NRINTNADGT IRVGGFKASL TTNAHLHIG KGGVNLNQA SGRSLIVENL
451 TGNITVDGPL RVNNQVGGYA LAGSSANFEF KAGTDTKNGT ATFNNDISLG
501 RFVNLKVDAL TANFKGIDTG NGGFNTLDFS GVTDKVNINK LITASTNVAV
551 KNFNINELIV KTNGISVGEY THFSEDIGSQ SRINTVRLET GTRSLFSGGV
601 KFKGGKELVI DEFYYSPWNY FDARNIKNVE ITNKLAFGPQ GSPWGTSKLM
651 FNNLTGQNA VMDYSQFLNL TIQGDFINNQ GTINYLVRRG KVATLSVGNA
701 AAMMFNNDID SATGFYKPLI KINSAQDLIK NTEHVLLKAK IIGYGNVSTG
751 TNGISNVNLE EQFKERLALY NNNNRMDTCV VRNTDDIKAC GMAIGDQSMV
801 NNPDNYKYLI GKAWKNIGIS KTANGSKISV YYLGNSTPTE NGGNTTNLPT
851 NTTSNARSAN NALAQNAFPA QPSATPNLVA INQHDFGTIE SVFELANRSK
901 DIDTLYANSK AQGRDLLQTL LIDSHDAGYA RKMIDATSAN EITKQLNTAT
951 TTLNNIASLE HKTSGLQTLS LSNAMILNSR LVNLSRRHTN HIDSFAKRLQ
1001 ALKDQKFASL ESAAEVLYQF APKYEKPTNV WANAIGGTSL NNGSNASLYG
1051 TSAGVDAYLN GQVEAIVGGF GSYGYSSFNN RANSLNSGAN NTNFGVYSRI
1101 LTNQHEFDLE AQGALGSDQS SLNFKSALLQ DLNQSYHYLA YSAATRASYG
1151 YDFAFFRNAL VLKPSVGVSY NHLGSTNFKS NSTNQVALKN GSSSQHLFNA
1201 SANVEARYYY GDTSYFYMNA GVLQEFHVG SNNAASLNTF KVNAARNPLN
1251 THARVMMGGE LKLAKEVFLN LGVVYLHNLI SNIGHFASNL GMRYSF

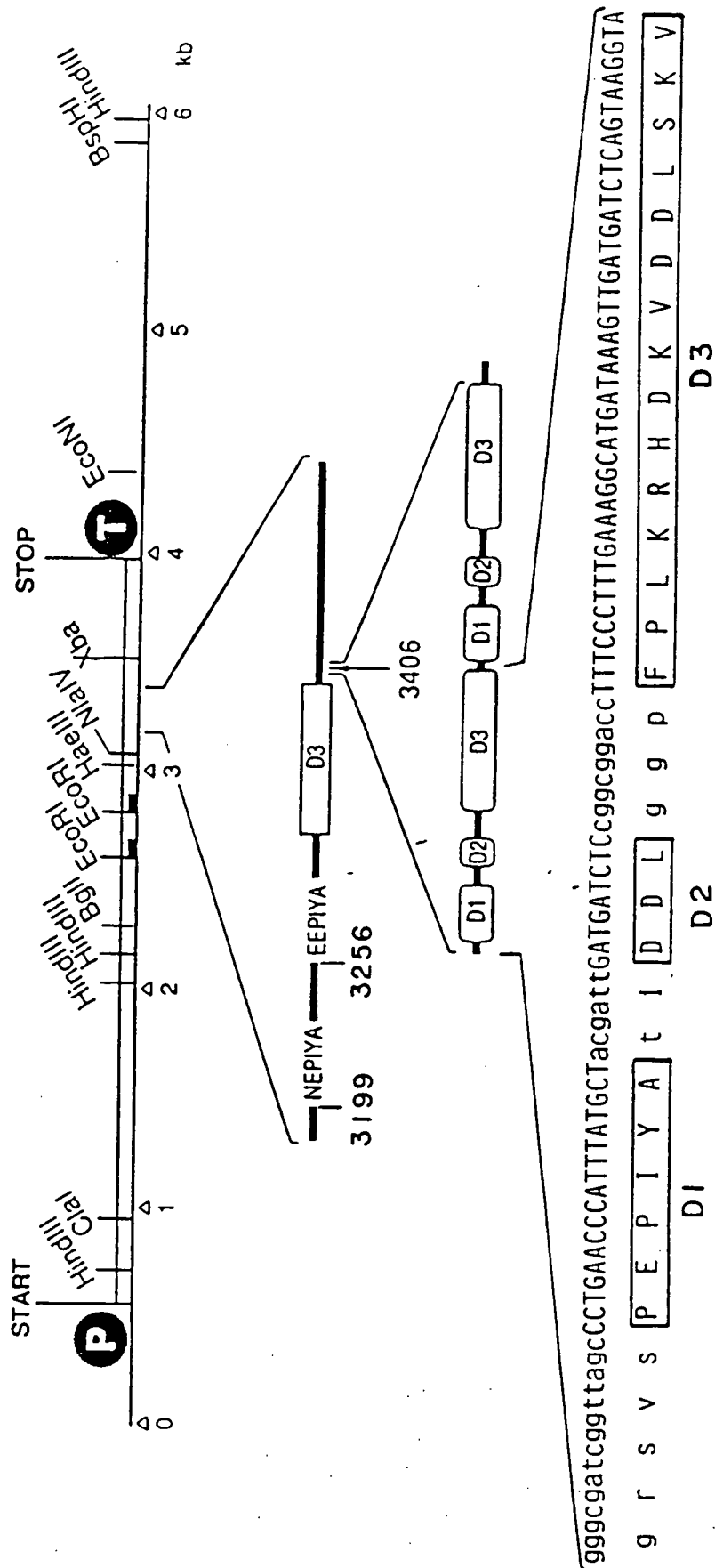
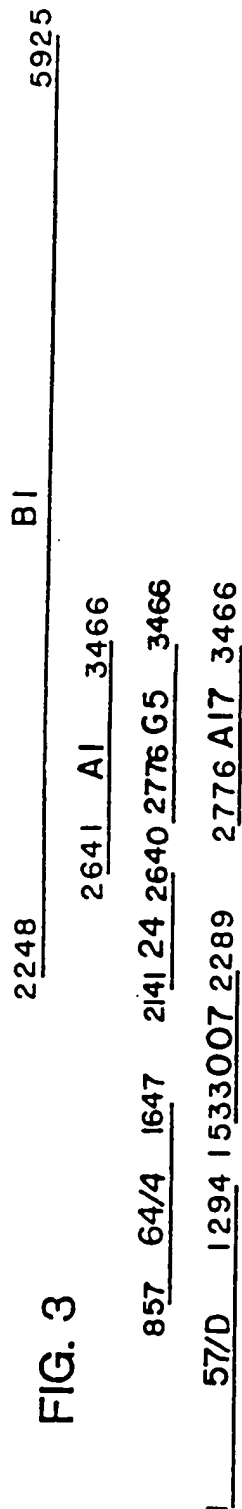
FIG. 2

ERSATZBLATT

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FIG. 3



CTCCATTTTAAAGCAACTCCATAGACCCTAAGAAGAACTTTTTTTTGAGGCTATCTTTGAAAG
GCTTAATTATACATGCTATAGTAAAGCATGACACACAAACCAAACTATTTTTAGAACGCTT
TCAAAAGATTCACTTCTTATTTCTTCTTATTAAGAGTCTTTTCATTTTTAGCAAAATTT
CTTTTTCAATATTAATATGATTAAATGAAAAAAAAAATGCTTGATATTTGTTGAT
TTGACACTAACAGATACCGATAGGTATGAACACTAGGTATAGTAAAGGAGAAACAATGACT
M T
ATAATCTTCAAGTAGCTTTCTTAAAGTTGATAAGCGTGTGCGCTTCATCAGCATCTGAT
23 N N L O V A F L K V D N A V A S Y D P D
CAATTAAGGGAAGAACTACTCCAATAAAGCGATCAAAAATCTTACCAAAAGAACTACGAT
63 O L R E E Y S N K A I K N P T K K N Q Y
GAATCTTCCACAAGAGCTTTCAGAAATTTGGGGATCAGCGTTACCGAAATTTTCACAAGT
103 E S S T K S F O K F G D Q R Y R I F T S
GAAATATCATCAACCCCTCTCTTGATGATAAGAGAAAGCGGAGTTTTTGAATCT
143 E N I I Q P I L D D K E K A E F L K S
ATGGCGTGTGTGATGAGTCTTGAAGAAGGAGGAGCAAAAAAATGGAGAGCT
183 M G V F D E S L K E R Q E A E K N G E P
GATGCAAGAAGCAATCAATCAAGACCAGTTCCTCCATGTCCTCAACAGATATAGCCACT
223 D V K E A I N Q E P V P H V Q P D I A T
AATTTTCTAAATCACTCTTGGCGATATGAAATGTTAGATGTTGAGGGAGTCGCTGAC
263 N F S K F T L G D M E M L D V E G V A D
TTATGGGAGTCATAATGGCATAGAACCTGAAAAGTTTCATTTGTTGATCGGGGCAAT
303 L M G S H N G I E P E K V S L L Y G G M
AACATATGGCTACAAATTAATATGCTATGAAACCGGCGTGGCTTAGCTAGTAGCA
343 N N V A T I I N V H M K N G S G L V I A
GGCTCACACAGGAGCATTAAGTCAAGAAGAGATCCAAAACAAATAGATTTCTGAAATTT
383 G S Q R A L S Q E E I Q N K I D F M E F
ACTGAGATTAAAGATTTCCAAAAGACTCTAAGGCTTATTTAGACGCCCTAGGGAATGAT
423 T E I K D F Q K D S K A Y L D A L G N D D
AATGGGATTGAGCTACACTCTCAAGATTATGGAAAAAGCAGATAAAGCTTTAGAT
463 N G D L S Y T L K D Y G K K A D K A L D
TATTCATTTTCAAAATACCAACGCGCTCCCAAGAAATCCCAATAGGGGTGATGGCGTTACG

FIG. 4 A

ERSATZBLATT

ATCTGCTCTATTGATTGTTTCCATTTTGTTCCTCATGTGGATCTTGTTGGATCACAAC	120
CATGTGCTCACCTTGACTAAACATTTCTCCAACCATACTTTAGCTTGCAATTGATTCT	240
TTGTTAATTGGGTAAATGTGAATCGTCTAGCTTTAGACGCTGCAACGATC66G	360
AATGAGATGTTCAAGACATGAATGACTACTCARGCTGTAGCGATTTTTAGCAGTCT	480
AACGAAACCAATTGACCACACACCAACCGAGCGCTTTTAAACCCGACGAATTTATC	600
N E T I D Q Q P Q T E A A F N P Q Q F I	720
CAAAACCAATCGTTGATAAGAACGATAGGGATAACAGGCAAGCTTTGAAGGAATCTCG	840
G K P I V D K N D R D N R Q A F E G I S	960
TTTTCAGACTTTTCAATAAGACCAATGATTTAATCAACAAGACAAATCTCATGTGTA	1080
F S D F I N K S M D L I N K D N L I D V	1200
TGGGTGTCCTCAAAACGATCGCTTAAATCAACACCGCATCGTCCGAAATTTTATG	1320
W V S H Q N D P S K I N T R S I R N F M	1440
GCCAAACAATCTTTTGCAGGAATCATTTAGGGAATCAAATCCGAACGGATCAAAAGTTC	1560
A K Q S F A G I I I G N Q I R T D Q K F	1680
ACTGTGGGATGGTTGGATATTTTCTCTCATTTATATTTGACAAAAACAATCTTCT	1800
T G G D W L D I F L S F I F D K K Q S S	1920
ACCACCACGACATACAAGGCTTACCGCTGAGCTAGAGATTTACTTGATGAAGGGGT	2040
T T T D I Q G L P P E A R D L L D E R G	2160
ATTGATCCCAATTACA:GTTCAATCAATTATTGATTCACATAACGCTCTGCTTCTGTG	
I D P N Y K F N Q L L I H N N A L S S V	
GGTGGTCTGGAGCTAGGATGATGGACGCCACCCTGGTTGTTATAAGACCACAAGGC	
G G P G A R H D W N A T V G Y K D Q Q G	
GGTGGTGAGAAAGGATTAAACACCCCTAGTTTTTATCTCTACAAGAAGACCACTACA	
G G E K G I N N M P S F Y L Y K E D Q L T	
CTTGACAAAAATGCTAAATAGACAACCTTGAGCGAAGAAAGAGAGAAAAATTCGA	
L A Q N N A K L D N L S E K E K E F R	
CGTATTGCTTTGTTCTAAAAAAGACAAAAACATTCAGCTTTAATTACTGAGTTGGT	
R I A F V S K K D T K H S A L I T E F G	
AGGAGAAAAATGTTACTCTTCAAGGTAGCCTTAAACATGATGGCGTGATGTTGTGAT	
R E K N V T L Q G S L K H D G V M F V D	
AATGGCGTTTCCCATTTAGAAGTAGGCTTTAAACAAGGTAGCTATCTTTAATTGCGCTGAT	

FIG. 4B

ERSATZBLATT

503 Y S N F K Y T N A S K N P N K G V G V T
 TTAATAATCTCGCTATCACTAGTTTCGTAAGCGGGAATTTAGAGGATAAATAACCACT
 543 L N N L A I T S F V R R N L E D K L T T
 GAATTGGTTGGAATACTTTAACTTCAATAAAGCTGTAGCTGACGCTAAACACAGGC
 583 E L V G K T L N F N K A V A D A K N T G
 CATTAGAGAAAGTAGAGAAAATTTGGAGAGCAAAAGCGGCAACAAAATAAATG
 623 H L E K E V E K K L E S K S G N K N K M
 GCTAATAGAGCGCAAGCAATCGCTTACGCTCAGAATCTTAAAGGCATCAAAAGGAA
 663 A N R D A R A I A Y A Q N L K G I K R E
 GAATTCAAAAATGGCAAAAATAAGGATTTACGACAGCGCAAGAACACTAAAGCCCTT
 703 E F K N G K N K D F S K A E E T L K A L
 AATGCAGCTTTGAATGAATTCAAAATGGCAAAAATAAGGATTTTCAGCAAGGTAACGCAA
 743 N A A L N E F K N G K N K D F S K V T Q
 AAAGTTGATAATCTCAATCAAGCGGTATCAGTGGCTAAAGCAACGGGTGATTTTCAGTAGG
 783 K V D N L N Q A V S V A K A T G D F S R
 CAAAAAATGAAGTCTCAATGCTAGAAAAAATCTGAATATATATCAATCCGTTAAGAT
 823 Q K N E S L N A R K K S E I Y Q S V K N
 AAAAATTTTCGGACATCAAGAAAGAGTTGAATGCAAAATTTGGAATTTCAATAACAA
 863 K N F S D I K K E L N A K L G N F N N N
 CAAGCAGCTAGCCTTGAAGAACCCTTTAGCTCAAGTTGCTAAAGGTAATGCAAAA
 903 Q A A S L E E P I Y A Q V A K K V N A K
 CCTTTGAAAAGGCATGATAAAGTTGATCTCAGTAAGTAGGCTTTCAAGGAATCAA
 943 P L K R H D K V D D L S K V G L S R N Q
 TTTGGCAATCTAGAGCAACGATAGACAAGCTCAAGATTTCTACAAAACACATCCCATG
 983 F G N L E Q T I D K L K D S T K H N P M
 TAGCTACTAACAGCCACATACGCATTAAATAGCAATATCAAAAATGGAGCAATCAATGAA

FIG.4C

ERSATZBLATT

N G V S H L E V G F N K V A I F N L P D
 AAAGGATTGTCCCAAGAAGCTAATAAGCTTATCAAGATTTTTTGGAGCAGCAACAAA 2280
 K G L S P Q E A N K L I K D F L S S N K
 AATTATGATGAAGTGAATAAGCTCAGAAGATCTTGAATAATCTCTAGGAACAGGAG 2400
 N Y D E V K K A Q K D L E K S L R K R E
 GAAGCAAAAGCTCAAGCTAACAGCCAAAAGATGAGATTTTGGTTGATCAATAAGAG 2520
 E A K A Q A N S Q K D E I F A L I N K E
 TTGCTGATAAATCTGAAAATGTCAACAAGAAATTTGAAGACTTTTGATATAATCTTTGAT 2640
 L S D K L E N V N K N L K D F D K S F D
 AAGGTTGGTGAAAGATTTAGGTATCAATCCAGATGGATTTTCAAAAGTTGAAAACCTT 2760
 K G S V K D L G I N P E W I S K V E N L
 GCAAAAAGCGACCTTGAAAATTCGTTAAAGATGTGATCATCAATCAAAAGGTAAAGGAT 2880
 A K S D L E N S V K D V I I N Q K V T D
 GTAGAGCAAGCGTTAGCGGATCTCAAAAATTTCTCAAGGAGCAATTTGGCCCAACAGCT 3000
 V E Q A L A D L K N F S K E Q L A Q A
 GGTGTGAATGGAACCTTAGTCGGTAATGGTTATCTCAAGCAGAGCCACAACTCTTTCT 3120
 G V N G T L V G N G L S Q A E A T T L S
 AACATAATGGACTCAAAAACGAACCCATTTATGCTAAAGTTAATAAAGAAAGCAGGG 3240
N N N G L K N E P I Y A K V N K K A G
 ATTGACCGACTCAATCAATAGCAAGTGGTTTGGGTGTGTAGGGCAAGCAGCGGCTTC 3360
 I D R L N Q I A S G L G V V G Q A A G E
 GAATTGGCTCAGAAAATTGACAATCTCAATCAAGCGGTATTCAGAAGCTAAAGCAGGTTT 3480
 E L A Q K I D N L N Q A V S E A K A G F
 AATCTATGGGTTGAAAGTGCAAAAAGTACCTGTAGTTGTGTAGCGAAACTAGACAAT 3600
 N L W V E S A K K V P A S L S A K L D N
 AAAGCGACCGCATGCTAACGCAAAAACCCCTGAGTGGCTCAAGCTCGTGAATGATAAG 3720

FIG.4D

ERSATZBLATT

1023 Y A T N S H I R I N S N I K N G A I N
 ATAGTTGGCATAATGTAGGAGCGTTCCTTTGTGAGAGTATGATAAAATTTGGCTTC
 1063 I V A H N V G S V P L S E Y D K I G F
 GTAAGACACTAATTTCTGGCTTTACGCAATTTTAAACCAATGCAATTTTCTACAGCA
 1103 V K D T N S G F T Q F L T N A F S T A
 GGTTCCAAAATCTTAAAGGATTAGGAATACCAAAACGCAAAACACCCCTTG
 1143 G F Q K S
 TGAATGCTACCAATTCATGGTATCATATCCCCATACATTCGTATCTAGCGTAGGAAG
 AACTCTGTAAATCCCTATTATAGGACACAGAGTGAGAACCAAACTCTCCCTACGG
 GACAGACACTAACGAAAGGCTTTGTTCTTAAAGCTGCAATGGATATTTCTACCCC
 CGAAAATTAAATTAAGGGTTATAAGAGAGCATAACTAGAAAACCAAGTAGCTATA
 GAAAATCAGAAAACCATAGGAATTATCACACCTTATAATGCCCAAAAAGACGCT
 ATGCTTTCAAGGTGAAGAGGCAGATATTATTATTTATCCACCGTGAAAACCTTGTG
 ATCTCATTTTGTGGGTAAAAGCTTCTTTGAGAAATTTATGAAGCGATGAGAAGA
 CATCTTCGCTTCAAAACGCTTTCATAATCTCTAAAGCGCTTTTATAATCAACAC
 TTATTAGCGTTACAAATTTGAGCCATCTTTAGCTTGTTTTCTAGCCAGATCACATC
 CTGCAAAATATCCTACAAATAGCATCGCCCGAATGGATGAGTAGGGGGGTTTGAAG
 TAAATAATCACTTCGGGAAAATCTTTAAGGGAGTGAAATATAACGCATGCAAGTT
 TGCAGAACATTCAAATAGCTTGTGTTTCAGGGCATTTGTATAGCGTTGGATTGG
 GCTAAATGCTTGGCTCAATCAGCCCAATAGGATTTTGGAAATGCTTTTGCATC
 TTGAAAAATCCAAAGCCTTAAGCCAAATTTGCTTGATCGTAGTGGGGTCTTTAGTG
 AGGCTTTTTAAACGCTAAACCTCCCAACCGCTATCAAAACGCTATTTTTCATG
 TCTTCATTGCTTAGTTTGTTCATTTTAGAATAGACAAAGCTT 5925

FIG. 4E

ERSATZBLATT

E K A T G M L T Q K N P E W L K L V N D K
 AACCAAGAATATGAAGATTATTCTGATTGTTCAAGTTTCCACCAGTTGAACAATGCT 3840
 N Q K N M K D Y S D S F K F S T K L N N A
 TCTTATTACTGCTTGGCGAGAGAAAATGCGGAGCATGGAATCAAGAACGTTAATACAAAAGGT 3960
 S Y Y C L A R E N A E H G I K N V N T K G
 CIAAAGCGAGGGGTTTAAATACTCTTAGCAGAAAATCCCAATCGTCTTAGTATTG6GA 4080
 TGTGCAAGTTACGCCCTTGGAGATATGATGTGAGACTGTAGGGAATGCGTTGGAGCTCA 4200
 GCAACATCAGCTAGGAAGCCCAATCGCTTTAGCGGTTGGGCACTTCACCTTAAATATCCC 4320
 AAAAGACTTAACCTTTGCTTAAATTAAGTTTGAATGCTAGTGGTTCGTGCTATAGTG 4440
 ACAAGATCAAGTTCAAAATCATAGAGCTTTTAGAGCAAATTTGATCGGCTCTTAACCAAA 4560
 TCGATCAGAAGTGGAATAACGGCTTCAAGAAATTTGATGAGCTCAAAATAGACACTGTGG 4680
 GTAATCTTCTTCTTGTGCTAGATTCTAAACGCTTGAATGTGGCTATTCTAGGGCAAAAGAA 4800
 ATATCTTTAGCGCTATTTTGAAGCTGTAGATAGGTAATCTTTTCCAAAGATAATCATTAGA 4920
 AATACCTTATAGTGTGAGCTATAGCCCTTTTGGGAATGAGTATTTGACTTTAAATTT 5040
 GCCGCTCGCATGAAATTCACCTTTAGGGAATGCGTGCAATTTTAAAGGGCGTATTTTG 5160
 GGCAAAATGCTCCATAAATAGCCCTCAATTTTGAAGGATTAAAGGGAATAATGCGTGAACC 5280
 TCTAACAAATTCGCCCTCTAAATACTTTCTCAATCAAGGCAACAAAAGAGAGAGTGGCTAAA 5400
 ATCGTGCCTTTTGTCCCTAGCACTAAATAGGGGCTTTTATCTTTACTTGTGCTTGATC 5520
 TCTTCTAAAGCTAGAGCGCTCGCTGTGTTGCTGATGCCAATCAATAATCAATCTGGTGGGT 5640
 CCATAAGGCACTCTAGCCGTATCGCCATAATAGATGATTTCATCAATATGCGCTTTTAAA 5760
 ACACCTTTTAAATTTAATGGGATTAAATAGGATTTTATTTTTCATTCATTAAAGTTTAAAT 5880

FIG. 4F

ERSATZBLATT

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10 30 50
AAGCTTGCTGTCATGATCACAAAAACACTAAAAACATTATTATTAAGGATACAAAATG
M
70 90 110
GCAAAAGAAATCAAATTTTCAGATAGTGCAGAGAAACCTTTTATTTGAAGGCGTGAGGCAA
A K E I K F S D S A R N L L F E G V R Q
130 150 170
CTCCATGACGCTGTCAAAGTAACCATGGGGCCAAGAGGCAGGAATGTATTGATCCAAAAA
L H D A V K V T M G P R G R N V L I Q K
190 210 230
AGCTATGGCGCTCCAAGCATCACCAAAGACGGCGTGAGCGTGGCTAAAGAGATTGAATTA
S Y G A P S I T K D G V S V A K E I E L
250 270 290
AGTTGCCAGTAGCTAACATGGGCGCTCAACTCGTTAAAGAAGTAGCGAGCAAAACCGCT
S C P V A N M G A Q L V K E V A S K T A
310 330 350
GATGCTGCCGGCGATGGCACGACCACAGCGACCGTGCTAGCTTATAGCATTTTTTAAAGAA
D A A G D G T T T A T V L A Y S I F K E
370 390 410
GGTTTGAGGAATATCACGGCTGGGGCTAACCTATTGAAGTGAAACGAGGCATGGATAAA
G L R N I T A G A N P I E V K R G M D K
430 450 470
GCTGCTGAAGCGATCATTAAATGAGCTTAAAAAGCGAGCAAAAAAGTAGGCGGTAAAGAA
A A E A I I N E L K K A S K K V G G K E
490 510 530
GAAATCACCCAAGTGGCGACCATTTCTGCAAACTCCGATCACAATATCGGGAAACTCATC
E I T Q V A T I S A N S D H N I G K L I
550 570 590
GCTGACGCTATGGAAAAAGTGGGTAAAGACGGCGTGATCACCGTTGAGGAAGCTAAGGGC
A D A M E K V G K D G V I T V E E A K G
610 630 650
ATTGAAGATGAATTGGATGTCGTAGAAGGCATGCAATTTGATAGAGGCTACCTCTCCCT
I E D E L D V V E G M Q F D R G Y L S P

FIG. 5A

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670 690 710
 TATTTTGTAAACGAACGCTGAGAAAATGACCGCTCAATTGGATAATGCTTACATCCTTTTA
 Y F V T N A E K M T A Q L D N A Y I L L
 730 750 770
 ACGGATAAAAAAATCTCTAGCATGAAAGACATTCTCCCGCTACTAGAAAAAACCATGAAA
 T D K K I S S M K D I L P L L E K T M K
 790 810 HindIII
 GAGGGCAAACCGCTTTTAAATCATCGCTGAAGACATTGAGGGCGAAGCTTTAACGACTCTA
 E G K P L L I I A E D I E G E A L T T L
 850 870 890
 GTGGTGAATAAATTAAGAGGCGTGTGAATATCGCAGCGGTTAAAGCTCCAGGCTTTGGG
 V V N K L R G V L N I A A V K A P G F G
 910 930 950
 GACAGAAGAAAAGAAATGCTCAAAGACATCGCTATTTTAACCGGCGGTCAAGTCATTAGC
 D R R K E M L K D I A I L T G G Q V I S
 970 990 1010
 GAAGAATTGGGCTTGAGTCTAGAAAACGCTGAAGTGGAGTTTTTAGGCAAAGCTGGAAGG
 E E L G L S L E N A E V E F L G K A G R
 1030 1050 1070
 ATTGTGATTGACAAAGACAACACCACGATCGTAGATGGCAAAGGCCATAGCGATGATGTT
 I V I D K D N T T I V D G K G H S D D V
 1090 1110 1130
 AAAGACAGAGTCGCGCAGATCAAAACCCAAATTGCAAGTACGACAAGCGATTATGACAAA
 K D R V A Q I K T Q I A S T T S D Y D K
 1150 1170 1190
 GAAAAATTGCAAGAAAGATTGGCTAAACTCTCTGGCGGTGTGGCTGTGATTAAAGTGGGC
 E K L Q E R L A K L S G G V A V I K V G
 1210 1230 1250
 GCTGCGAGTGAAGTGGAAATGAAAGAGAAAAAAGACCGGGTGGATGACGCGTTGAGCGCG
 A A S E V E M K E K K D R V D D A L S A
 1270 1290 1310
 ACTAAAGCGGCGGTTGAAGAAGGCATTGTGATTGGTGGCGGTGCGGCTCTCATTGCGCGG
 T K A A V E E G I V I G G G A A L I R A

FIG. 5B

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1330 1350 1370
GCTCAAAAAGTGCATTTGAATTTGCACGATGATGAAAAAGTGGGCTATGAAATCATCATG
A Q K V H L N L H D D E K V G Y E I I M
1390 1410 1430
CGCGCCATTAAAGCCCCATTAGCTCAAATCGCTATCAACGCTGGTTATGATGGCGGTGTG
R A I K A P L A Q I A I N A G Y D G G V
1450 1470 1490
GTCGTGAATGAAGTAGAAAAACACGAAGGGCATTTTGGTTTTAACGCTAGCAATGGCAAG
V V N E V E K H E G H F G F N A S N G K
1510 1530 1550
TATGTGGATATGTTTAAAGAAGGCATTATTGACCCCTTAAAAGTAGAAAGGATCGCTCTA
Y V D M F K E G I I D P L K V E R I A L
1570 1590 1610
CAAAATGCGGTTTCGGTTTCAAGCCTGCTTTTAACACAGAAGCCACCGTGCATGAAATC
Q N A V S V S S L L L T T E A T V H E I
1630 1650 1670
AAAGAAGAAAAAGCGACTCCGGCAATGCCTGATATGGGTGGCATGGGCGGTATGGGAGGC
K E E K A T P A M P D M G G M G G M G G
1690 1710 1730
ATGGGCGGCATGATGTAAGCCCGCTTGCTTTTTAGTATAATCTGCTTTTAAAATCCCTTC
M G G M M *
1750 1770 1790
TCTAAATCCCCCCTTTCTAAAATCTCTTTTTTGGGGGGGTGCTTTGATAAAACCGCTCG

1810 1830
CTTGTA AAAACATGCAACAAAAAATCTCTGTTAAGCTT

FIG. 5C